50015 ELEMENTARY TEACHER EDUCATION STANDARDS

Institutions will be expected to demonstrate the use of performance assessments within their programs. Examples of such assessments are provided as a guideline. Institutions are not restricted to using the examples listed, but may develop others that demonstrate candidates' ability to apply what they have learned in the elementary school setting.

The standards for the preparation of elementary school teachers are grouped into the following categories that parallel the ten model standards from the Interstate New Teacher Assessment and Support Consortium (INTASC) and align with the expectations of the NCATE unit accreditation standards.

50015.1 Development, Learning, and Motivation

50015.2 Curriculum

- 2a. Central Concepts, Tools of Inquiry, and Structures of Content
- 2b. English Language Arts
- 2c. Science
- 2d. Mathematics
- 2e. Social Studies
- 2f. The Arts
- 2g. Health Education
- 2h. Physical Education
- 2i. Connections Across the Curriculum

50015.3 Instruction

- 3a. Integrating and Applying Knowledge for Instruction
- 3b. Adaptation to Diverse Students
- 3c. Development of Critical Thinking, Problem Solving and Performance Skills
- 3d. Active Engagement in Learning
- 3e. Communication to Foster Learning

50015.4 Assessment

50015.5 Professionalism

- 5a. Practices and Behaviors of Developing Career Teachers
- 5b. Reflection and Evaluation
- 5c. Collaboration with Families
- 5d. Collaboration with Colleagues and the Community

50015.6 Instructional Technologies

50015.1 DEVELOPMENT, LEARNING, AND MOTIVATION

The program requires the study of development, learning, and motivation--Candidates know, understand, and use the major concepts, principles, theories, and research related to development of children and young adolescents to construct learning opportunities that support individual students' development, acquisition of knowledge, and motivation. The program uses varied assessments of candidates' understanding and abilities to apply that knowledge.

Examples of performance assessments may include how to:

- base their teaching and related professional responsibilities on a thorough understanding of developmental periods of childhood and early adolescence.
- consider, accommodate, and integrate the physical, social, emotional, cognitive, and linguistic developmental characteristics of children and young adolescents in curriculum planning, instruction, and assessment of student learning.
- draw on developmental knowledge to plan curriculum that is achievable but also challenging for children at various developmental levels.
- adapt curriculum and teaching to motivate and support student learning and development, drawing upon an in-depth knowledge of child and young adolescent development and an understanding of students' abilities, interests, individual aspirations, and values.
- consider and address ways in which cultures and social groups differ are important and affect learning.
- recognize when an individual student's development differs from typical developmental patterns and collaborate with specialists to plan and implement appropriate learning experiences that address individual needs.
- demonstrate in their practice that all children can learn when developmental factors are recognized, respected, and accommodated.
- consider diversity an asset and respond positively to it.

50015.2 CURRICULUM

The program requires the study of central concepts, tools of inquiry, and structures of content--Candidates know, understand, and use the central concepts, tools of inquiry, and structures of content for students across the elementary grades and can create meaningful learning experiences that develop students' competence in subject matter and skills for various developmental levels. The program uses varied assessments of candidates' understanding and abilities to apply that knowledge.

50015.2b. The program requires the study of English language arts--Candidates demonstrate a high level of competence in use of the English language arts and they know, understand, and use concepts from reading, language and child development, to teach reading, writing, speaking, viewing, listening, and thinking skills and to help students successfully apply their developing skills to many different situations, materials, and ideas. The program uses varied assessments of candidates' understanding and abilities to apply that knowledge.

Examples of performance assessments may include how to:

- demonstrate knowledge and skill in teaching the fundamentals of the English Language Arts.
- model effective use of English, including its syntax, lexicon, history, varieties, literature, and oral and written composing processes.
- understand how and assist elementary children to develop and learn to read, write, speak, view, and listen effectively.
- use their knowledge and understanding of language, first and second language development, and the language arts to design instructional programs and strategies that build on students' experiences and existing language skills and result in their students becoming competent, effective users of language.
- teach students to read competently and encourage students' enjoyment of reading through multiple instructional strategies, technologies, and a variety of language activities.
- teach children to read with a balanced instructional program that includes an emphasis on use of letter/sound relationships (phonics), context (semantic and syntactic), and text that has meaning for students.
- teach students a variety of strategies to monitor their own reading comprehension.
- demonstrate familiarity with, and the ability to use and recommend to students, many reading materials based on different topics, themes, and a variety of situations and consisting of different types, including stories, poems, biography, non-fiction, many categories of literature written for children, and texts from various subject areas.
- encourage elementary students' understanding of their individual responses to what they read and sharing those responses, and help students think critically about what they read.
- provide both instruction in and opportunities for elementary students to develop effective writing and speaking skills so that they can communicate their knowledge, ideas, understanding, insights, feelings, and experiences to other students and to parents, teachers, and other adults.
- provide students with many different writing and speaking experiences in order to teach the skills of writing and speaking.
- enable students to explore the uses of different types of writing and speaking with different audiences and in different situations.
- help students develop their capacities to listen so that they understand, consider, respond to, and discuss spoken material, including non-fiction, stories, and poems.
- recognize what preconceptions, error patterns, and misconceptions they may expect to find in students' understanding of how language functions in communication, and use strategies to help students correct their misunderstandings of the development and uses of language.
- use formative and summative assessment to determine the level of students' competence in their understanding of and use of language.
- use the results of such formative and summative assessment to plan further instruction.

50015.2c.The program requires the study of science--Candidates know, understand, and use fundamental concepts in the subject matter of science—including physical, life, and

earth and space sciences—as well as concepts in science and technology, science in personal and social perspectives, the history and nature of science, the unifying concepts of science, and the inquiry processes scientists use in discovery of new knowledge to build a base for scientific and technological literacy. The program uses varied assessments of candidates' understanding and abilities to apply that knowledge.

Examples of performance assessments may include how to:

- demonstrate a broad general understanding of science and teaching elementary students the nature of science, and the content and fundamentals of physical, life, earth and space sciences, and their interrelationships.
- demonstrate familiarity with, and how to teach, the major concepts and principles that unify all scientific effort and that are used in each of the science disciplines: (1) systems, order, and organization; (2) evidence, models, and explanation; (3) change, constancy, and measurement; (4) evolution and equilibrium; and (5) form and function.
- engage elementary students in the science inquiry process that involves asking questions, planning and conducting investigations, using appropriate tools and techniques to gather data, thinking critically and logically about relationships between evidence and explanations, constructing and analyzing alternative explanations, and communicating scientific arguments and explanations.
- introduce students to understandings about science and technology and to distinctions between natural objects and objects made by humans by creating experiences in making models of useful things, and by developing students' abilities to identify and communicate a problem, and to design, implement, and evaluate a solution.
- understand and recognize naive theories and misconceptions most children have about scientific and technological phenomena and help children build understanding.
- understand and apply the use of assessment through diverse data-collection methods as ways to inform their teaching and to help students learn scientific inquiry, scientific understanding of the natural world, and the nature and utility of science.

50015.2d. The program requires the study of mathematics--Candidates know, understand, and use the major concepts, procedures, and reasoning processes of mathematics that define number systems and number sense, geometry, measurement, statistics and probability, and algebra in order to foster student understanding and use of patterns, quantities, and spatial relationships that can represent phenomena, solve problems, and manage data. The program uses varied assessments of candidates' understanding and abilities to apply that knowledge.

Examples of performance assessments may include how to:

- employ methods of teaching elementary students to explore, conjecture, and reason logically using various methods of proof; to solve non-routine problems; to communicate about and through mathematics by writing and orally using everyday language and mathematical language, including symbols; to represent mathematical situations and relationships; and to connect ideas within mathematics and between mathematics and other intellectual activity.

- help students understand and use measurement systems (including time, money, temperature, two and three dimensional objects using non-standard and standard customary and metric units); explore pre-numeration concepts, whole numbers, fractions, decimals, percents and their relationships; apply the four basic operations (addition, subtraction, multiplication, and division) with symbols and variables to solve problems and to model, explain, and develop computational algorithms; use geometric concepts and relationships to describe and model mathematical ideas and real-world constructs; as well as formulate questions, and collect, organize, represent, analyze, and interpret data by use of tables, graphs, and charts.
- help elementary students identify and apply number sequences and proportional reasoning, predict outcomes and conduct experiments to test predictions in real-world situations; compute fluently; make estimations and check the reasonableness of results; select and use appropriate problem-solving tools, including mental arithmetic, pencil-and-paper computation, a variety of manipulatives and visual materials, calculators, computers, electronic information resources, and a variety of other appropriate technologies to support the learning of mathematics.
- demonstrate knowledge of, and strategies to help students understand, the history of mathematics and contributions of diverse cultures to that history.
- recognize what mathematical preconceptions, misconceptions, and error patterns to look for in elementary students' work as a basis to improve understanding and construct appropriate learning experiences and assessments.

50015.2e. The program requires the study of social studies--Candidates know, understand, and use the major concepts and modes of inquiry from the social studies--the integrated study of history, geography, the social sciences, and other related areas--to promote elementary students' abilities to make informed decisions as citizens of a culturally diverse democratic society and interdependent world. The program uses varied assessments of candidates' understanding and abilities to apply that knowledge.

Examples of performance assessments may include how to:
- demonstrate a foundational understanding of social studies content, including history, geography, the social sciences (such as anthropology, archaeology, economics, political science, psychology, and sociology) and other related areas (such as humanities, law, philosophy, religion, mathematics, science and technology).
- use knowledge, skills, and dispositions from social studies to organize and provide integrated instruction in elementary grades for the study of major themes, concepts and modes of inquiry drawn from academic fields that address: (1) culture; (2) time, continuity, and change; (3) people, places, and environment; (4) individual development and identity; (5) individuals, groups, and institutions; (6) power, governance, and authority; (7) production, distribution, and consumption; (8) science, technology, and society; (9) global connections; and (10) civic ideals and practices.
- use their knowledge of social studies to help students learn about academic fields of knowledge, as well as major themes that integrate knowledge across academic fields.
- develop experiences to help elementary students learn about the historical development of democratic values; the basic principles of government and citizenship in a democratic republic; the past, present, and future; spatial relations; the

development of nations, institutions, economic systems, culture, and cultural diversity; the influences of belief systems; and the humanities.
- devise learning activities that help students read, write, listen, discuss, speak, and research to build background knowledge; examine a variety of sources (e.g., primary and secondary sources, maps, statistical data, and electronic technology-based information); acquire and manipulate data; analyze points of view; formulate well-supported oral and written arguments, policies, and positions; construct new knowledge and apply knowledge in new settings.
- use formative and summative assessments in planning and implementing instruction.

50015.2f. The program requires the study of the arts—Candidates know, understand, and use—as appropriate to their own knowledge and skills—the content, functions, and achievements of dance, music, theater, and the several visual arts as primary media for communication, inquiry, and insight among elementary students. The program uses varied assessments of candidates' understanding and abilities to apply that knowledge.

Examples of performance assessments may include how to:
- understand distinctions and connections between arts study and arts experiences, and recognize that arts instruction must be sequential.
- encourage the kind of study and active participation that leads students to competence in and appreciation of the arts.
- utilize their own knowledge and skills in the arts disciplines, and that of arts specialist teachers and/or other qualified arts professionals, to enable students: (1) to communicate at a basic level in the four arts disciplines--dance, music, theater, and the visual arts—including knowledge and skills in the use of basic vocabularies, materials, traditional and technology-based tools, techniques, and thinking processes of each arts discipline; (2) to develop and present basic analyses of works of art from structural, historical, and cultural perspectives; (3) to have an informed acquaintance with exemplary works of art from a variety of cultures and historical periods; and (4) to relate basic types of arts knowledge and skills within and across the arts disciplines, and to make connections with other disciplines.
- develop student competence at a basic level that will serve as the foundation for more advanced work.
- provide many routes to competence, recognizing that elementary students may work in different arts at different times, that their study may take a variety of approaches, and that their abilities may develop at different rates.

50015.2g. The program requires the study of health education--Candidates know, understand, and use the major concepts in the subject matter of health education to create opportunities for student development and practice of skills that contribute to good health. The program uses varied assessments of candidates' understanding and abilities to apply that knowledge.

Examples of performance assessments may include how to:

- construct understanding of the foundations of good health, including the structure and function of the body and its systems and the importance of physical fitness and sound nutrition.
- design learning activities that help students understand the benefits of a healthy lifestyle for themselves and others as well as the dangers of diseases and activities that may contribute to disease.
- demonstrate awareness of major health issues concerning children and the social forces that affect them, and of the need to impart information on these issues sensitively.
- address issues in ways that help students recognize potentially dangerous situations, clarify misconceptions, and find reliable sources of information.

50015.2h. The program requires the study of physical education—Candidates know, understand, and use—as appropriate to their own understanding and skills—human movement and physical activity as central elements to foster active, healthy life styles and enhanced quality of life for elementary students. The program uses varied assessments of candidates' understanding and abilities to apply that knowledge.

Examples of performance assessments may include how to:
- demonstrate an understanding of physical education content relevant to the development of physically educated individuals.
- structure learning activities to ensure that students demonstrate competence in many movement forms, and can apply movement concepts and principles to the learning and development of motor skills.
- address physical inactivity as a major health risk factor in our society and recognize the critical importance of physically active life styles for all students.
- help students develop knowledge and skills necessary to achieve and maintain a health-enhancing level of physical fitness.
- develop appreciation the intrinsic values and benefits associated with physical activity.
- structure movement experiences that foster opportunities for enjoyment, challenge, self-expression, and social interaction, and that elicit responsible personal and social behavior and respect for individual differences among people in physical activity.

50015.2i. The program requires the study of connections across the curriculum--Candidates know, understand, and use the connections among concepts, procedures, and applications from content areas to motivate elementary students, build understanding, and encourage the application of knowledge, skills, tools, and ideas to real world issues. The program uses varied assessments of candidates' understanding and abilities to apply that knowledge.

Examples of performance assessments may include how to:
- make connections in instruction across the disciplines and draw upon knowledge of developmental stages to motivate students, build understanding, and encourage the application of knowledge, skills, and ideas to lives of elementary students across fields of knowledge and in real world situations.

- help elementary students learn the power of multiple perspectives to understand complex issues.
- demonstrate scholarly habits of mind through personal actions and teaching, including: (1) a desire to know, (2) constructive questioning, (3) use of information and systematic data, (4) acceptance of ambiguity where it exists, (5) willingness to modify explanations, (6) a cooperative manner in responding to questions and solving problems, (7) respect for reason, imagination, and creativity and (8) honesty.

50015.3 INSTRUCTION
The program requires the study of integrating and applying knowledge for instruction—Candidates plan and implement instruction based on knowledge of students, learning theory, subject matter, curricular goals, and community. The program uses varied assessments of candidates' understanding and abilities to apply that knowledge.

Examples of performance assessments may include how to:
- demonstrate understanding of learning theory, subjects taught in elementary schools (described in sections 8.9-2a through 8.9-2i under Curriculum), curriculum development, and student development and know how to use this understanding in planning instruction to meet curriculum goals.
- demonstrate multiple methods and strategies to help students appreciate and be engaged in the subject matter.
- select and create learning experiences that are appropriate for curriculum goals, meaningful to elementary students, and based upon principles of effective teaching (e.g. that activate students' prior knowledge, anticipate preconceptions, encourage exploration and problem-solving, and build new skills on those previously acquired).
- use a variety of resources, including technology and textbooks, and look beyond their classroom to determine how numerous information resources in both print and electronic form might benefit their students.
- understand and use appropriate technology to help students become capable technology users through communication; through access, management, analysis and problem solving with information; and through collaborative and self-directed learning.
- collaborate with specialists to promote learning in all areas of the curriculum for all elementary students.

50015.3b. The program requires the study of adaptation to diverse students—Candidates understand how elementary students differ in their development and approaches to learning, and create instructional opportunities that are adapted to diverse students. The program uses varied assessments of candidates' understanding and abilities to apply that knowledge.

Examples of performance assessments may include how to:

- identify differences in approaches to learning and performance, including different learning styles, and ways students demonstrate learning.

- identify how elementary students' learning is influenced by individual experiences, talents, disabilities, and prior learning, as well as language, culture, family, and community values.
- seek assistance and guidance from specialists and other resources to address elementary students' exceptional learning needs and understand the importance of collaboration with specialists and families.
- identify and design instruction appropriate to elementary students' levels of development, learning styles, strengths, and needs, using teaching approaches that are sensitive to the multiple experiences of students.
- plan instructional tasks and activities appropriate to the needs of students who are culturally diverse and those with exceptional learning needs in elementary schools.
- apply knowledge of the richness of contributions from diverse cultures to each content area studied by elementary students.

50015.3c. The program requires the study of development of critical thinking, problem solving and performance skills—Candidates understand and use a variety of teaching strategies that encourage elementary students' development of critical thinking, problem solving, and performance skills. The program uses varied assessments of candidates' understanding and abilities to apply that knowledge.

Examples of performance assessments may include how to:
- use their understanding of cognitive processes associated with various kinds of learning and how these processes can be stimulated.
- demonstrate use of principles and techniques, advantages and limitations, associated with appropriate teaching strategies (e.g. cooperative learning, direct instruction, inquiry, whole group discussion, independent study, interdisciplinary instruction).
- enhance learning through use of a wide variety of materials as well as collaboration with specialists, other colleagues, and technological resources, and through multiple teaching and learning strategies that will promote development of critical thinking, problem solving, and performance capabilities.

50015.3d. The program requires the study of active engagement in learning—Candidates use their knowledge and understanding of individual and group motivation and behavior among students at the elementary level to foster active engagement in learning, self motivation, and positive social interaction and to create supportive learning environments. The program uses varied assessments of candidates' understanding and abilities to apply that knowledge.

Examples of performance assessments may include how to:
- demonstrate understanding of and use principles of effective classroom management as well as human motivation and behavior from the foundational sciences of psychology, anthropology, and sociology.
- use a range of strategies and can collaborate with specialists to promote positive relationships, cooperation, conflict resolution, and purposeful learning in the classroom.

- create learning communities in which elementary students assume responsibility for themselves and one another, participate in decision-making, work collaboratively and independently, and engage in purposeful learning activities.
- demonstrate understanding of and use appropriate and effective interpersonal and small group communication techniques to create an effective learning environment.

50015.3e. The program requires the study of communication to foster learning—Candidates use their knowledge and understanding of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the elementary classroom. The program uses varied assessments of candidates' understanding and abilities to apply that knowledge.

Examples of performance assessments may include how to:
- use communication theory, language development, and the role of language in learning among elementary students, and they also understand how cultural and gender differences can affect communication in the classroom.
- model effective communication strategies in conveying ideas and information and in asking questions (e.g. monitoring the effects of messages; restating ideas and drawing connections; using visual, aural, and kinesthetic cues; being sensitive to nonverbal cues given and received).
- use oral and written discourse between themselves and their students, and among students, to develop and extend elementary students' understanding of subject matter.
- demonstrate effective use of a variety of media communication tools, including audio-visual aids and computer-based technologies, to enrich learning opportunities.

50015.4 ASSESSMENT
The program requires the study of assessment for instruction—Candidates know, understand, and use formal and informal assessment strategies to plan, evaluate, and strengthen instruction that will promote continuous intellectual, social, emotional, and physical development of each elementary student. The program uses varied assessments of candidates' understanding and abilities to apply that knowledge.

Examples of performance assessments may include how to:
- incorporate assessment as an essential and integral part of instruction as it defines the beginning point; helps identify objectives, materials and effective teaching methods or techniques; and informs the need to re-teach or adapt instruction.
- describe the characteristics, uses, advantages, and limitations of different types of assessment and which are appropriate for evaluating how elementary students learn, what they know, and what they are able to do in each subject area.
- make use of the knowledge that many different assessment tools and strategies, accurately and systematically used, are necessary for monitoring and promoting learning for each student.
- appropriately use a variety of formal and informal assessment techniques (e.g. observation, portfolios of elementary student work, teacher-made tests, performance

tasks, projects, student self-assessments, peer assessment, and standardized tests) to enhance their knowledge of individual students, evaluate students' progress and performances, modify teaching and learning strategies, and collaborate with specialists on accommodating the needs of students with exceptionalities.
- use formative and summative assessments to determine student understanding of each subject area and take care to align assessments with instructional practice.
- describe how technology can facilitate appropriate forms of assessment and provide evidence across multiple dimensions of student performance.
- use technology to improve the efficiency and effectiveness of assessment processes and in management of instruction.
- monitor their own teaching strategies and behavior in relation to student success, modifying plans and instructional approaches accordingly.

50015.5 PROFESSIONALISM

50015.5a The program requires the study of practices and behaviors of developing career teachers—Candidates understand and apply practices and behaviors that are characteristic of developing career teachers. The program uses varied assessments of candidates' understanding and abilities to apply that knowledge.

Examples of performance assessments may include how to:
(While synthesis of knowledge is a lifetime process for a professional, by the end of teacher preparation candidates ready to enter the classroom as elementary generalist teachers should:)

- work independently on a variety of disciplinary and pedagogical problems and responsibilities by combining as appropriate their knowledge and skills in (a) child development; (b) English language arts, science, mathematics, social studies, the arts, health and physical education, (c) instructional technique and learning technologies, and (d) assessment;
- focus and defend independent analyses and value judgments about disciplinary content and teaching methodologies, their various potential relationships, and their applications to specific circumstances;
- acquire the intellectual tools to work with evolving issues and conditions as time and situations change, including the ability to make wise decisions according to time, place, and population;
- identify, access, and use technology-based resources in support of their continuing professional development;
- demonstrate awareness of and commitment to the profession's codes of ethical conduct; and
- understand basic interrelationships and interdependencies among the various professions and activities that constitute the disciplines, content, and processes of elementary education.

50015. 5b. The program requires the study of reflection and evaluation—Candidates are aware of and reflect on their practice in light of research on teaching and resources available for professional learning; they continually evaluate the effects of their

professional decisions and actions on students, parents, and other professionals in the learning community and actively seek out opportunities to grow professionally. The program uses varied assessments of candidates' understanding and abilities to apply that knowledge.

Examples of performance assessments may include how to:

- understand methods of inquiry that provide them with a variety of self-assessment and problem solving strategies for reflecting on their practice, its influences on elementary students' growth and learning, and the complex interactions between them.
- identify major areas of research on teaching and of resources available for professional learning (e.g. professional literature, colleagues, professional associations, professional development activities).
- use classroom observation, information about students, and research as sources for evaluating the outcomes of teaching and learning and as a basis for experimenting with, reflecting on, and revising practice.
- apply their knowledge of current research and national, state, and local guidelines relating to the disciplines taught in elementary school.

50015.5c. The program requires the study of collaboration with families—Candidates know the importance of establishing and maintaining a positive collaborative relationship with families to promote the intellectual, social, emotional, and physical growth of children. The program uses varied assessments of candidates' understanding and abilities to apply that knowledge.

Examples of performance assessments may include how to:

- understand different family beliefs, traditions, values, and practices across cultures and within society and use their knowledge effectively.
- involve families as partners in supporting the school both inside and outside the classroom.
- respect parents' choices and goals for their children and communicate effectively with parents about curriculum and children's progress.
- involve families in assessing and planning for individual children, including children with disabilities, developmental delays, or special abilities.

50015.5d. The program requires the study of collaboration with colleagues and the community—Candidates foster relationships with school colleagues and agencies in the larger community to support students' learning and well-being. The program uses varied assessments of candidates' understanding and abilities to apply that knowledge.

Examples of performance assessments may include how to:

- understand schools as organizations within the larger community context and the operations of relevant aspects of the systems in which they work.
- understand how factors in the elementary students' environments outside of school may influence the students' cognitive, emotional, social, and physical well-being and, consequently, their lives and learning.

- participate in collegial activities designed to make the entire school a productive learning environment and develop effective collaborations with specialists.

50015.6 INSTRUCTIONAL TECHNOLOGY

The program requires the study of current, appropriate instructional technologies. The program uses varied assessments of candidates' understanding and abilities to apply that knowledge.

Examples of performance assessments may include how to:

- demonstrate appropriate use of various technologies within their instructional practices.
- select and use appropriate technology tools specific to elementary content area(s).
- use technology to effectively manage communications, instructional planning, and record keeping.

History

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